

Sketch a graph of each function using the three critical points.

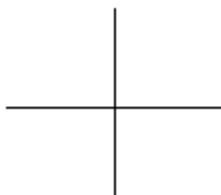
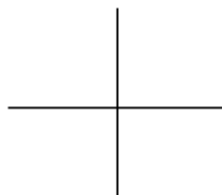
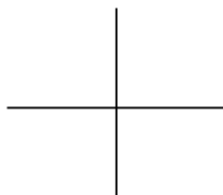
1. $F(x) = |x|$

2. $F(x) = \sqrt{x}$

3. $F(x) = x^2$

4. $F(x) = x$

5. $F(x) = x^3$



Describe in words how the parent function is moving.

6. $F(x) = 2(x-1)^2 + 3$ _____

7. $F(x) = |2(x-1)| + 2$ _____

8. $F(x) = -2\sqrt{x+3} - 1$ _____

9. $F(x) = -x^3 - 2$ _____

10. $F(x) = x + 2$ _____

State the parent function and graph the three critical points. Then with another color move the points according to the transformation and graph it.

11. $F(x) = -2(x-3)^3 + 1$

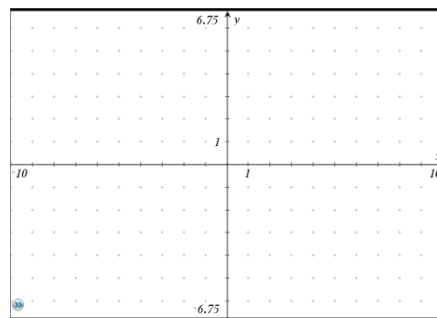
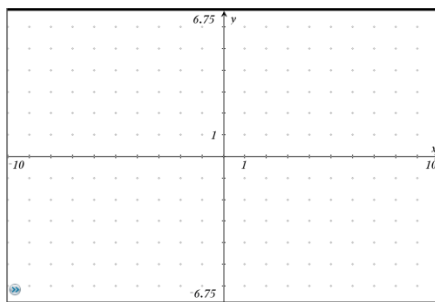
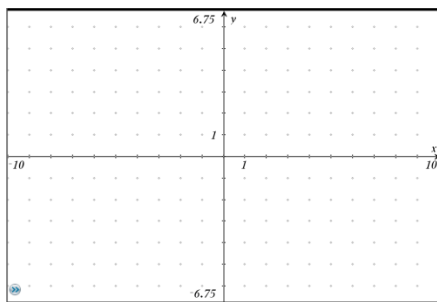
12. $F(x) = \left|\frac{1}{2}(x+3)\right| - 1$

13. $F(x) = \sqrt{-2(x+2)} - 3$

parent _____

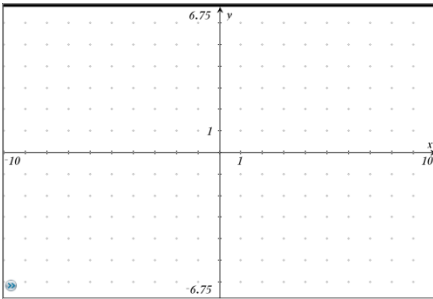
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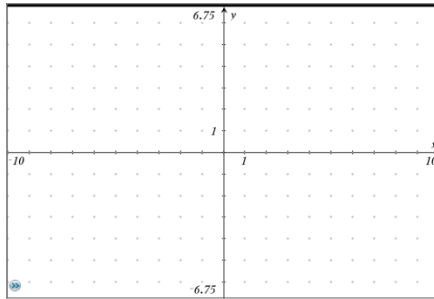
14. $F(x) = \frac{1}{2}x^2 + 3$

parent _____



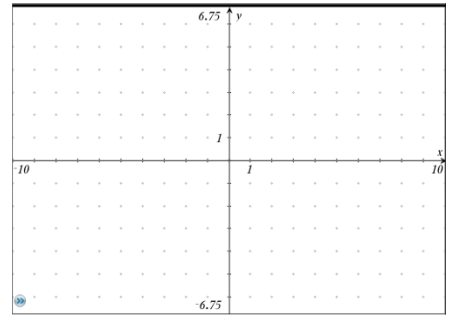
15. $F(x) = x + 3$

parent _____



16. $F(x) = -2|-(x + 3)| - 4$

parent _____



17. Make up your own function with transformations and then write out a description of how to graph it.

$f(x) =$ _____
